IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appellant:	MADHAVAN	Patent Application	
Application No.:	10/635,741	Group Art Unit:	2152
Filed:	August 5, 2003	Examiner:	Dailey, Thomas J.

For: METHOD AND SYSTEM OF MANAGING COMPUTING RESOURCES

APPEAL BRIEF

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I. Real Party in Interest

The assignee of the present application is Hewlett-Packard Development Company, L.P.

II. Related Appeals and Interferences

There are no related appeals or interferences known to the Appellant.

III. Status of Claims

Claims 3, 17, and 26 have been cancelled. Claims 1, 2, 4-16, 18-25 and 27-30 are pending. Claims 1, 2, 4-16, 18-25 and 27-30 are rejected. This Appeal involves Claims 1, 2, 4-16, 18-25 and 27-30.

IV. Status of Amendments

All proposed amendments have been entered. An amendment subsequent to the Final Action has not been filed.

V. Summary of Claimed Subject Matter

Independent Claim 1 recites, "A computing resource management method." Establishing 201 a pool of free computing resources 304 in a computing system 400, 500," is described at least at page 11 line 35 to page 12 line 6; and Figures 2-5. "Selecting 202 a free computing resource from said pool of free computing resources 304 to replace an operating computing resource in said computing system 400, 500," is described at least at page 12 lines 8-14; figures 2-5. "Configuring 203 said selected free computing resource to operate in said computing system 400, 500, after replacing said operating computing resource with said free computing resource in said computing system 400, 500, wherein said free computing resources 304 comprises resources that are not preconfigured for use in said computing system 400, 500 according to a configuration of said operating computing resource," is described at least at page 12 lines 16-20; figures 2 and 3.

Independent Claim 15 recites, "A computing resource management system," is described at least at page 13 line 30 to page 14 line 4. "A pool of free computing resources 304 in a computing system 400, 500," which is described at least at Figures 3, 4, 5; page 11 line 37 to page 12 line 1; page 12 lines 1-16. "A pool of operating computing resources 301 operating in said computing system 400, 500," is described at least at page 12 lines 1-6; Figures 3-5. "Means 302 for selecting 202 a selected free computing resource from said pool of free computing resources 304 to replace a first operating computing resource in said computing system 400, 500," which is described at least at page 13 lines 33-34; page 12 lines 8-14. "Means 302 for configuring 203 said selected free computing resource to operate in said computing system 400, 500 after replacing said first operating computing resource with said selected free computing resource, wherein said free computing resources 304 comprises

resources that are not preconfigured for use in said computing system 400, 500 according to a configuration of said operating computing resource," is described at least at page 13 lines 37-38; page 12 lines 16-20;

Independent Claim 22 recites, "A computer-useable storage medium comprising computer-readable program code embodied therein for causing a computer system to implement a computing resource management method instructions, said program code including a resource manager module, said resource manager module comprising instructions," is described at least at page 12 line 36 to page 13 line 27. "Monitoring a pool of free computing resources 304 in a computing system 400, 500," is described at least at Figures 3, 4, and 5; page 13 lines 9-12; page 12 lines 1-6. "Selecting 202 a selected free computing resource from said pool of free computing resources 304 to replace an operating computing resource in said computing system 400, 500," is described at least at page 12 lines 8-14; figures 2-5. "Configuring 203 said selected free computing resource to operate in said computing system 400, 500 after replacing said operating computing resource with said selected free computing resource, wherein said free computing resources 304 comprises resources that are not preconfigured for use in said computing system 400, 500 according to a configuration of said operating computing resource," is described at least at page 12 lines 16-20; figures 2 and 3.

VI. Grounds of Rejection to Be Reviewed on Appeal

1. Claims 1, 2, 4-16, 18-25 and 27-30 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2004/0078622 by Kaminsky et al. (referred to hereinafter as "Kaminsky") in view of U.S. Patent Publication No. 2004/0039815 by Evans (referred to herein as "Evans").

VII. Argument

1. Whether Claims 1, 2, 4-16, 18-25 and 27-30 are Unpatentable Under 35 U.S.C. §103(a) over Kaminksy and Evans.

Appellant has reviewed Kaminsky and Evans and respectfully submits that embodiments of the present invention are patentable over Kaminsky and Evans for at least the following rationale.

First, Appellant respectfully submits that Kaminsky teaches away from "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource," (emphasis added) as recited in independent Claims 1, 15 and 22. Appellant notes that the instant Office Action states "Kaminsky does not disclose that said free computing resources comprise resources not preconfigured for use in said operating system" (Office Action mailed March 11, 2008; page 5, lines 21-22).

"As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries" including "[a]scertaining the differences between the claimed invention and the prior art" (MPEP 2141(II)). "In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious" (emphasis in original; MPEP 2141.02(I)).

Appellant respectfully notes that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention" (emphasis in original; MPEP 2141.02(VI); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)).

Independent Claim 1 recites (emphasis added):

> A computing resource management method comprising:
> establishing a pool of free computing resources in a computing system;
> selecting a free computing resource from said pool of free computing resources to replace an operating computing resource in said computing system; and
> configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource.

Independent Claims 15 and 22 recite similar embodiments. Claims 2 and 4-14 that depend from independent Claim 1, Claims 16 and 18-21 that depend from independent Claim 15 and Claims 23-25 and 27-30 that depend from independent Claim 22 also include these embodiments.

Referring to the abstract, Kaminsky recites "[a] method, system and apparatus for server failure diagnosis and self-healing in a server arm. An automatic server farm which has been configured in accordance with the inventive arrangements can include a multiplicity of servers enabled to respond to requests received from clients which are external to the server farm" (emphasis added). Kaminsky also states in paragraphs 0028 through 0029 state,

> In the course of the communicative coupling of client 110 and the selected one of the servers 150, request/response transactions can occur. Ordinarily, where the selected one of the servers 150 can respond to requests from the client 110 in a suitable fashion, session affinity can be maintained. However, where the selected one of the servers 150 fails to respond to a request 190A…the client 110 can identify the selected one of the servers 150 as having failed to respond to the request 190A…
>
> In any case, upon detecting the retry request 190B, the network dispatcher 140 can assign a new one of the servers 150 to respond to the retry request 190B. More importantly, the new one of the servers 150 can undertake remedial measures in the selected one of the servers 150…Such remedial measures can include, for instance, the recycling of the selected one of the servers 150, the restarting of a particular application or process in the selected one of the servers 150, and the notification of the administrative node 160 (emphasis added).

Kaminsky further states at lines 3-6 of paragraph 0026, "The server farm 120 can include one or more servers 150, each server 150 hosting one or more computing processes 170 and associated data 180." Appellant understands Kaminsky to teach a server farm that includes a multiplicity of servers that have already been configured to respond to requests received from a client. Each of the servers is hosting computing processes. In paragraphs 0028-0029 Kaminsky teaches that if a particular server that is assigned to respond to the request of a particular client fails, another server, from the server farm, can be assigned to respond to that request. The new server can perform remedial measures, such as restarting an application or process, and notifying an administrative node. In other words, Appellant understands the servers of Kaminsky to be interchangeable, and thus are preconfigured to respond to the same requests.

By teaching that the servers have already been configured and each are hosting computing processes, Appellant submits that Kaminsky teaches away from "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use

in said computing system according to a configuration of said operating computing resource" (emphasis added).

Second, Appellant respectfully submits that "[i]t is improper to combine references where the references teach away from their combination" (emphasis added; MPEP 2145(X)(D)(2); *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983)). Appellant respectfully submits that there is no motivation to combine the teachings of Kaminsky and Evans, because Kaminsky teaches away from the suggested modification.

As presented above, by teaching that the servers have already been configured and each are hosting computing processes, Appellant submits that Kaminsky teaches away from "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added). Therefore, Appellant respectfully submits that Kaminsky teaches away from the suggested modification.

Third, Appellant respectfully submits that the proposed modification would change the principle of operation of Kaminsky and would render Kaminsky unsatisfactory for its intended purpose.

Appellant respectfully notes that "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention" (emphasis in original; MPEP 2141.02(VI); *W.L. Gore & Associates, Inc. v.*

Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984)). Moreover, Appellant notes that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious" (emphasis added) (MPEP 2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). Moreover, "[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment" (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Appellant respectfully submits that the principle of operation of Kaminsky is to provide multiple servers that are each able to respond to requests (see at least Abstract and [0017]). In particular, Appellant submits that the suggested modification would change the principle of operation of Kaminsky, in that servers would require reconfiguration prior to responding to a request. Furthermore, such a modification would render Kaminsky unsatisfactory for its intended purpose of providing multiple servers that are each able to respond to requests.

In the Response to Arguments section, the Office Action asserts that Appellant has argued the pieces of asserted art individually and one cannot show nonobviousness by attacking the pieces of asserted art individually where the rejection is based on a combination. Appellant respectfully disagrees with the assertion that Appellant has argued the pieces of asserted art individually. An example of arguing pieces of asserted art individual would be if Appellant argued that asserted art A does not teach element 1 of Claim 1 and asserted art B does not teach element 2 of Claim 1 where asserted art A was asserted

against element 2 and asserted art B was asserted against element 1. In contrast to arguing pieces of asserted art individually, Appellant has argued that Kaminsky teaches away from "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added). Since Kaminsky teaches away from "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added).Kaminsky's teachings cannot be modified by Evans' teachings to arrive at "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added).

The Office Action also asserts on page 3 and page 4 that the test for obviousness is not whether the features of a secondary piece of asserted art can be bodily incorporated into the structure of a primary piece of asserted art. Rather, the test is what the combined teachings of the pieces of asserted art would have suggested to those of ordinary skill in the art. Appellant respectfully submits per KSR, MPEP 2141(II), MPEP 2141.02(I), MPEP2141.02(VI), MPEP2145(X)(D)(2), MPEP 2141.02(VI), MPEP 2143.01, referred to herein, that since Kaminsky teaches away from "configuring said selected free computing

resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added), the combined teachings of Kaminsky and Evans would not suggest "configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource" (emphasis added) to one of ordinary skill in the art.

For at least the above reasons, Appellant respectfully asserts that the combination of Kaminsky and Evans does not satisfy a *prima facie* case of obviousness under 35 U.S.C. §103(a). Therefore, Appellant respectfully asserts that the combination of Kaminsky and Evans does not teach, disclose or suggest the claimed embodiments of the present invention as recited in independent Claims 1, 15 and 22, that these claims overcome the rejection under 35 U.S.C. §103(a), and that these claims are thus in a condition for allowance. Appellant respectfully submits that the combination of Kaminsky and Evans also does not teach or suggest the additional claimed features of the present invention as recited in Claims 2 and 4-14 that depend from independent Claim 1, Claims 16 and 18-21 that depend from independent Claim 15 and Claims 23-25 and 27-30 that depend from independent Claim 22. Therefore, Appellant respectfully submits that Claims 2, 4-14, 16, 18-21, 23-25 and 27-30 also overcome the rejection under 35 U.S.C. §103(a), and are in a condition for allowance as being dependent on an allowable base claim.

Conclusion

Appellant believes that pending Claims 1, 2, 4-16, 18-25 and 27-30 are patentable over Kaminksy and Evans, alone or in combination. As such, Appellant submits that Claims 1, 2, 4-16, 18-25 and 27-30 are patentable over the asserted art.

Appellant respectfully requests that the rejection of Claims 1, 2, 4-16, 18-25 and 27-30 be reversed. The Appellant wishes to encourage the Examiner or a member of the Board of Patent Appeals to telephone the Appellant's undersigned representative if it is felt that a telephone conference could expedite prosecution.

Respectfully submitted,
Wagner Blecher LLP

Dated: 11/25/2008

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VIII. Appendix - Clean Copy of Claims on Appeal

1. A computing resource management method comprising:

establishing a pool of free computing resources in a computing system;

selecting a free computing resource from said pool of free computing resources to replace an operating computing resource in said computing system; and

configuring said selected free computing resource to operate in said computing system, after replacing said operating computing resource with said free computing resource in said computing system, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource.

2. The method of claim 1, wherein the configuring of said selected free computing resource further comprises:

configuring said selected free computing resource to operate in accordance with a configuration of said operating computing resource being replaced.

4. The method of claim 1, wherein said selecting and configuring said free computing resource is initiated automatically upon a failure of said operating computing resource in said computing system.

5. The method of claim 1, wherein said selecting and configuring said free computing resource is initiated in response to an end-user request for a changed operating computing resource in said computing system.

6. The method of claim 1, wherein said selecting and configuring of said free computing resource is based on a usage plan for using said free resources in said free pool of computing resources.

7. The method of claim 6, wherein said usage plan for using said free resources is implementable automatically in response to a failure of an operating computing resources in said computing system.

8. The method of claim 1, wherein said selecting and configuring said free computing resource to replace said operating computing resource occurs transparently to end-users in said computing system.

9. The method of claim 1, wherein said computing system comprises a Utility Data Center.

10. The method of claim 1, wherein said computing system comprises a computer network.

11. The method of claim 1, further including monitoring said computing system to detect failed operating computing resources.

12. The method of claim 11, further including relegating said failed operating computing resources to a pool of quarantined computing resources.

13. The method of claim 12, further including rehabilitating said failed operating computing resources for reprovisioning into said computing system.

14. The method of claim 1, wherein said computing resources comprises routers, servers, data storage systems and CPU's.

15. A computing resource management system comprising:

a pool of free computing resources in a computing system;

a pool of operating computing resources operating in said computing system; and

means for selecting a selected free computing resource from said pool of free computing resources to replace a first operating computing resource in said computing system; and

means for configuring said selected free computing resource to operate in said computing system after replacing said first operating computing resource with said selected free computing resource, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource.

16. The computing resource management system of claim 15, wherein said means for configuring said selected free computing resource is operable to configure said selected free computing resource to operate in accordance with a configuration of said first operating resource being replaced.

18. The computing resource management system of claim 15, wherein said means for configuring said selected free computing resource is operable to automatically configure said selected computing resource to operate in said computing system upon a failure of said first operating computing resource in said computing system.

19. The computing resource management system of claim 15, wherein said means for configuring said selected free computing resource is operable to automatically configure said selected free computing resource in response to an end-user request for changing said first operating computing resource in said computing system.

20. The computing resource management system of claim 15, wherein said means for configuring said selected free computing resource is operable to configure said selected free computing resources transparently to an end-user in said computing system.

21. The computing resource management system of claim 15, wherein said means for configuring said selected free computing resources is operable to configure said selected free computing resources based on a usage plan for using said free computing resources in said free computing resource pool.

22. A computer-useable storage medium comprising computer-readable program code embodied therein for causing a computer system to implement a computing resource management method instructions, said program code including a resource manager module, said resource manager module comprising instructions for:

monitoring a pool of free computing resources in a computing system;

selecting a selected free computing resource from said pool of free computing resources to replace an operating computing resource in said computing system; and

configuring said selected free computing resource to operate in said computing system after replacing said operating computing resource with said selected free computing resource, wherein said free computing resources comprises resources that are not preconfigured for use in said computing system according to a configuration of said operating computing resource.

23. The computer-useable storage medium of claim 22, wherein said resource manager module includes instructions for monitoring said operating computing resources in said computing system.

24. The computer-useable storage medium of claim 22, wherein said resource manager module includes instructions for detecting failures of said operating computing resource in said computing system.

25. The computer-useable storage medium of claim 22, wherein said resource manager module includes instructions for configuring said selected free computing resource to operate in accordance with a configuration of said operating computing resource being replaced.

27. The computer-useable storage medium of claim 22, wherein said resource manager module includes instructions for selecting and configuring said free computing resource

automatically upon detecting a failure of said operating computing resource in said computing system.

28. The computer-useable storage medium of claim 22, wherein said resource manager module includes instructions for selecting and configuring said free computing resource based on an end-user request for operating computing resource in said computing system.

29. The computer-useable storage medium of claim 22, wherein said resource manager module includes instruction for selecting and configuring said free computing resource transparently to an end-user in said computing system.

30. The computer-useable storage medium of claim 22, wherein said resource manager module includes instruction for selecting and configuring said free computing resource based on a usage plan for using computing resources from said free computing resources pool.

IX. Evidence Appendix

No evidence is herein appended.

X. Related Proceedings Appendix

No related proceedings.